*Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

CW/HW#50: Congruent Triangles SSS, SAS, and ASA

Geometry

Due: Tuesday, December 1st. 2015

Failure to show all work will result in a LaSalle.

You will be able to determine when to use SSS, SAS, and ASA.

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| A. Two triangles are congruent if… | | |
| B. What is SSS? Provide an example. | C. What is SAS? Provide an example. | D. What is ASA? Provide an example. |
| E. Why do we use Side- Side- Side theorem (or Side- Angle- Side, or Angle- Side- Angle Theorem?) | | |

Determine if the two triangles are congruent. If they are congruent, how did you determine your answer – SSS, SAS, or ASA? Explain why by writing a congruency statement or a written explanation.

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| 1.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.12.18 PM.png | 2.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.12.26 PM.png |
| 3.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.12.33 PM.png | 4.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.12.41 PM.png |
| 5  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.12.48 PM.png | 6.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.12.54 PM.png |
| 7.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.13.02 PM.png | 8.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.13.07 PM.png |

State what additional information is required to in order to know that the triangles are congruent for the given reason. Explain why that information is needed (either written explanation or a congruency statement)

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| 9.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.17.23 PM.png | 10.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.17.35 PM.png |
| 11.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.17.42 PM.png | 12.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.17.50 PM.png |
| 13.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.17.58 PM.png | 14.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.18.05 PM.png |

Mark all of the angles and sides of each pair of triangles to indicate they are congruent.

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| 15.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.24.40 PM.png | 16.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.24.46 PM.png |
| 17.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.24.52 PM.png | 18.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.24.58 PM.png |

(a) Write down the formula you would use to find the area. (b) Find the area of each shape.

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| Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.29.18 PM.png19. | 20.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.29.24 PM.png |
| Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.29.29 PM.png21. | Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.29.35 PM.png22. |
| 23.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.29.40 PM.png | Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.29.52 PM.png24. |

ANGLES:

|  |  |
| --- | --- |
| 25.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.32.57 PM.png | Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.33.03 PM.png26. |
| Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.33.11 PM.png27. Solve for b. | 28. Solve for b.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.33.17 PM.png |
| 29. Solve for x.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.33.22 PM.png | 30. Solve for x.  Macintosh HD:Users:rmitrovich:Desktop:Screen Shot 2015-11-29 at 5.33.27 PM.png |